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*Free Inspections and Estimates*

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Established in 1991, LIPTAK EMERGENCY WATER REMOVAL specializes in professional water, sewage, mold remediation, and drying services.

We're committed to providing attention to all of the details that customers always appreciate. Because it's the kind of difference that makes a real difference.

This is what sets us apart -  
and we proudly stake our reputations on it every day.

- IICRC- Certified Mold, Water Damage, Fire & Smoke License # 20839
- Certified Mold Technician I.O.T. License # 90505
- Lead Renovator EPA Certified # R-1-19228-10-0336
- Mass. Lead Safe Renovator Supervisor License # MRA-007
- Home Improvement Contractor License # 164310
  - BBB Member
  - Angie's List A+ Rating
- Greater Chamber of Commerce Member
  - NEIRC



*Cory Liptak*

# Mold Remediation

## Clean up Process

1. Isolate the contaminated area.  
For Level 2 remediation, also cover all doorways and any other openings with sealed polyethylene sheeting. .
2. Suppress dust.
3. Remove all wet and mold-damaged porous materials.
4. Clean. All non-porous materials and wood surfaces that are moldy must be cleaned. Level 2 requires you to vacuum all surfaces with a HEPA vacuum, and then clean all surfaces with a detergent solution.
5. Visibility test. All areas should be visibly free of contamination and debris — no dust and dirt means no mold.
6. Cleaned areas should be dried to allow leftover moisture to evaporate. To speed up the drying process, use fans, dehumidifiers or raise the indoor air temperature.
7. All materials that were removed should be replaced or repaired.
8. Just because the mold is gone and there's no dirt or dust doesn't mean that you're done. The last step is to determine if the clean-up efforts have been successful.<sup>2</sup>

<sup>2</sup> August 02, 2005, Michael Dickens, BuildIQ  
<http://www.probuilder.com/five-steps-proper-mold-remediation>

When it comes to mold, the key is to implement a comprehensive moisture management strategy. Potential liability and health issues from mold can be dramatically decreased by doing it right the first time.

Clean up must be immediate and thorough, following a process like the above steps.

## Equipment

**Moisture meter:** a tool that measures the moisture level in building materials.

**Humidity gauge:** measures the amount of humidity in the indoor environment. Often gauges are paired with a thermometer to measure the temperature.

**Borescope:** a hand-held tool that allows the user to see potential mold problems inside walls, ceilings, crawl spaces, and other tight spaces.

**Digital camera:** used to document findings during assessment.

**Personal protective equipment (PPE):** includes respirators, gloves, impervious suit, and eye protection. These items can be used during the assessment and remediation processes.

**Thermographic camera :** Infrared thermal imaging cameras are often used (and effective) in addition to moisture meters to double check moisture meter findings, and look at the broader picture.

# Mold Remediation

## Assessment

The first step in an assessment is to determine if mold is present. This is done by visually examining the premises. If mold is growing and visible this helps determine the level of remediation that is necessary. If mold is actively growing and is visibly confirmed, sampling for specific species of mold is unnecessary.[8]

These methods, considered non-intrusive, only detect visible and odor-causing molds. Sometimes more intrusive methods are needed to assess the level of mold contamination. This would include moving furniture, lifting and/or removing carpets, checking behind wallpaper or paneling, checking in ventilation duct work, opening and exposing wall cavities, etc.

Careful detailed visual inspection and recognition of moldy odors should be used to find problems needing correction. Efforts should focus on areas where there are signs of liquid moisture or water vapor (humidity) or where moisture problems are suspected. The investigation goals should be to locate indoor mold growth to determine how to correct the moisture problem and remove contamination safely and effectively.<sup>1</sup>



## Remediation

The first step in solving an indoor mold problem is stopping the source of moisture. Next is to remove the mold growth.

Significant mold growth may require professional mold remediation to remove the affected building materials and eradicate the source of excess moisture.

The purpose of the clean-up process is to eliminate the mold and fungal growth and to remove contaminated materials. As a general rule, simply killing the mold with a biocide is not enough. The mold must be removed since the chemicals and proteins, which cause a reaction in humans, are still present even in dead mold.<sup>1</sup>

<sup>1</sup>"A Brief Guide to Mold, Moisture, and Your Home. EPA 402-K-02-003". U. S. Environmental Protection Agency. September 2010. Retrieved 10 May 2013

# What You Should Know About Water Sources and Water Damage

## Category 1

Originates from a sanitary source and poses no substantial risk from dermal, ingestion, or inhalation exposure. However, it may not always remain clean after it comes into contact with other surfaces or materials.

## Category 2

Contains significant contamination and has the potential to cause discomfort or sickness if contacted or consumed by humans. It may contain potentially unsafe levels of microorganisms or nutrients for microorganisms, as well as other organic or inorganic matter (chemical or biological).

## Category 3

Grossly contaminated and may contain pathogenic, toxigenic or other harmful agents. Such water sources may carry silt, organic matter, pesticides, heavy metals, regulated materials, or toxic organic substances.

*\*Time and temperature can also affect the quality of water, thereby changing its category.*

**There are four primary classifications of water damage.**

**Class 1** is the least amount of water, absorption and evaporation. It affects only part of a room or area, or larger areas containing materials that have absorbed minimal moisture. Little or no wet carpet and/or cushion is present.

**Class 2** involves a large amount of water, absorption and evaporation. It affects at least an entire room of carpet and cushion (pad). Water has wicked up walls less than 24 inches. There is moisture remaining in structural materials and substructure soil.

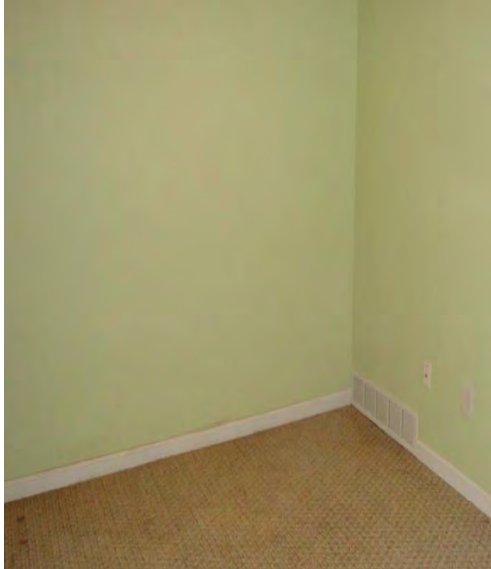
**Class 3** involves the greatest amount of water, absorption and evaporation. Water may have come from overhead. Ceilings, walls, insulation, carpet, cushion and subfloor in virtually the entire area are saturated.

**Class 4** relates to specialty drying situations. Wet materials with very low permeance/porosity (e.g., hardwood, plaster, brick, concrete, light weight concrete and stone). Typically, there are deep pockets of saturation, which require very low specific humidity. These types of losses may require longer drying times and special methods.

*\*See the IICRC S500 for complete definitions.*

# Water Damage Left Untreated

Room appears dry, with no damage.



Baseboard removal reveals mold & water mark stain begins to show on wall.



Dry wall removal reveals microbial growth inside wall.



Microbial growth from neglected moisture results in dry wall and carpet replacement.



# Mold Remediation

Some individuals may be at a greater risk of becoming sick from being exposed to indoor mold growth. These individuals include:

- ▶ Infants and children
- ▶ Elderly people
- ▶ Individuals with asthma and allergies
- ▶ Immune compromised individuals (i.e. people with HIV infection, chemotherapy patients, and organ transplant recipients, etc.)

If you have special health concerns or feel that mold is affecting your health please contact your doctor for help as soon as possible.

## How do I know if I have a MOLD problem?

Use your eyes and your nose to determine if your home or workplace has a mold problem... If you see mold and there is a musty smell, it is probably safe to assume you have a mold problem. Also, look for signs of moisture problems such as water leaks in pipes and the roof, standing water, and water stains on the floors, walls, ceilings, and other building materials.



## WARNING:

- 1.If you are allergic to mold or suffer from asthma you should not attempt to clean up the mold and leave the home or workplace while the clean up occurs.
- 2.If the mold is growing over greater than 10 sq. ft. of a surface area within your home or workplace, you may need to hire a professional to clean it up.
- 3.**BE ON THE ALERT FOR FURTHER MOLD GROWTH AND PREVENT IT FROM GROWING!!!**
- 4.Keep humidity levels below 60%!
- 5.Exhaust cooking areas, clothes dryers, and bathrooms to the outdoors. Make sure they do not vent to the attic or inside.
- 6.Have your heating/cooling system checked regularly & change filters monthly.
- 7.Immediately address any leaking pipes, flooded basements, roof leaks, ice dams, and other sources of water within the home or workplace.
- 8.In hot and humid weather use a dehumidifier or air conditioner.

# Mold Remediation

## What is Mold?

Mold is a fungus that is found almost everywhere. More than likely you are breathing mold spores **RIGHT NOW!** Mold grows throughout the environment, inside and out, in soils, on food, on plants, and even on building materials when moisture is present. Mold occurs naturally in the environment and is a necessary decomposer of organic matter. In fact, cheese and penicillin are both products of mold. There are various colors of mold including white, green, black, and orange. Mold reproduces by releasing microscopic spores that spread easily in the air and can enter a home or building through windows, doors, cracks, and vents.



## What does MOLD need in order to grow?

Like any other living thing, mold needs water to survive. So, damp areas within homes and workplaces are prime areas where mold might grow. **MOLD HAS TO HAVE MOISTURE TO GROW!** So the key to avoiding mold growth inside homes and the workplace is to keep them dry and maintain them.



## Can MOLD affect our health?

Mold affects each person differently. Some of us who are allergic to mold may be more sensitive to mold exposure than those of us who are not allergic. However, exposure to high concentrations of mold and mold spores over time is unhealthy for anyone. Some of the most common health problems associated with exposure to indoor mold includes:

- ▶ Painful headaches
- ▶ Disorientation & dizziness
- ▶ Nausea (diminished reflex response)
- ▶ Diarrhea
- ▶ Depression
- ▶ Loss of concentration
- ▶ Chronic asthma
- ▶ Chronic fatigue
- ▶ Rashes and open sores

## MOLD

"Molds produce tiny spores to reproduce. Mold spores waft through the indoor and outdoor air continually. When mold spores land on a damp spot indoors, they may begin growing and digesting whatever they are growing on in order to survive. There are molds that can grow on wood, paper, carpet, and foods. When excessive moisture or water accumulates indoors, mold growth will often occur, particularly if the moisture problem remains undiscovered or un-addressed. There is no practical way to eliminate all mold and mold spores in the indoor environment; **the way to control indoor mold growth is to control moisture.**"

**"Molds have the potential to cause health problems.** Molds produce allergens (substances that can cause allergic reactions), irritants, and in some cases, potentially toxic substances (mycotoxins). Inhaling or touching mold or mold spores may cause allergic reactions in sensitive individuals. Allergic responses include hay fever-type symptoms, such as sneezing, runny nose, red eyes, and skin rash (dermatitis). Allergic reactions to mold are common. They can be immediate or delayed. Molds can also cause asthma attacks in people with asthma who are allergic to mold. In addition, mold exposure can irritate the eyes, skin, nose, throat, and lungs of both mold-allergic and non-allergic people."

from [www.epa.gov/mold](http://www.epa.gov/mold)

## FLOODS

During a flood cleanup, the indoor air quality in your home or office may appear to be the least of your problems. However, failure to remove contaminated materials and to reduce moisture and humidity can present serious long-term health risks. Standing water and wet materials are a breeding ground for microorganisms, such as viruses, bacteria, and mold. **They can cause disease, trigger allergic reactions, and continue to damage materials long after the flood.**

from [www.epa.gov/flood](http://www.epa.gov/flood)

## SEWAGE

"When sewage overflows into your home it can cause a multitude of problems, including exposure to viruses and disease. **It's important to clean up sewage water quickly.** According to the Environmental Protection Agency, some sewage-related illnesses include gastroenteritis, abdominal cramps, diarrhea, vomiting, cholera and giardiasis. The airborne microorganisms can be inhaled or ingested after contact with the hands. An open cut or rash can become infected and swollen."

from [www.ehow.com/facts\\_7594384\\_sewage-water-removal.html](http://www.ehow.com/facts_7594384_sewage-water-removal.html)

Standard Air Mover



Axial Air Mover



Standard Dehumidifier  
(7.5 gal removal per day)



Large Dehumidifier  
(12.5 gal removal per day)



Wall/Cabinet Injector



Hardwood/ Wall/ Cabinet  
Machine



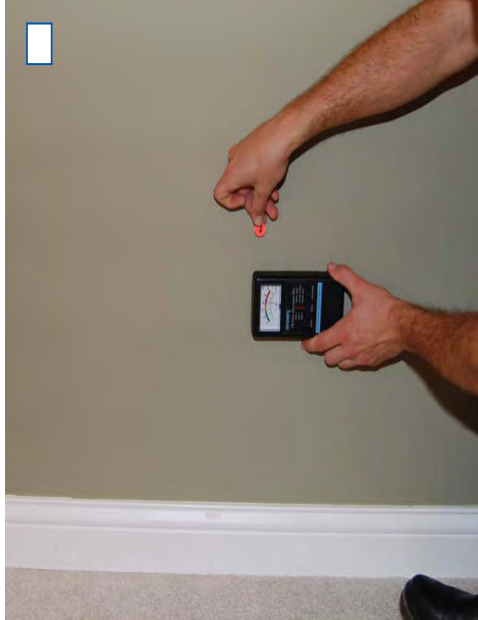
STEP 5: Injection system installed.



STEP 6: Install turbo vent.



STEP 1: Locate & mark wet areas on walls.



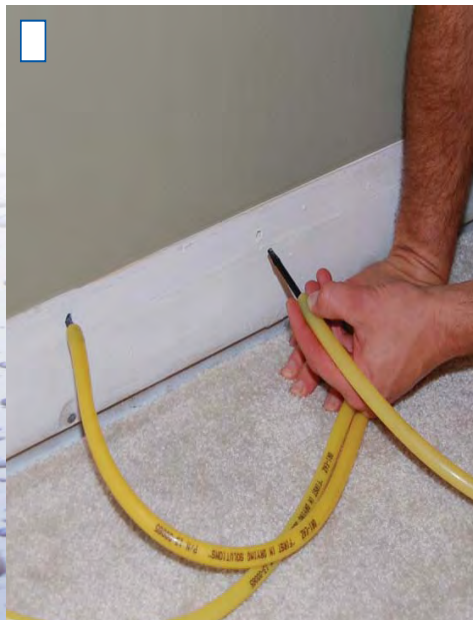
STEP 2: Remove Baseboards.



STEP 3: Drill drying ports.



STEP 4: Install injectors into walls.



Ozone Machine



Vapor Shark



Hydrox Machine



Air Scrubber



Truck Mounted Extractor



Electric Heater



# CARPET - Category 1 (Fresh Water)

# Drying - Cabinets

STEP 1: Locate wet areas.



STEP 2: Extract water from carpet & pad.



STEP 1: Locate wet areas on cabinets.



STEP 2: Remove trim from toe kick.



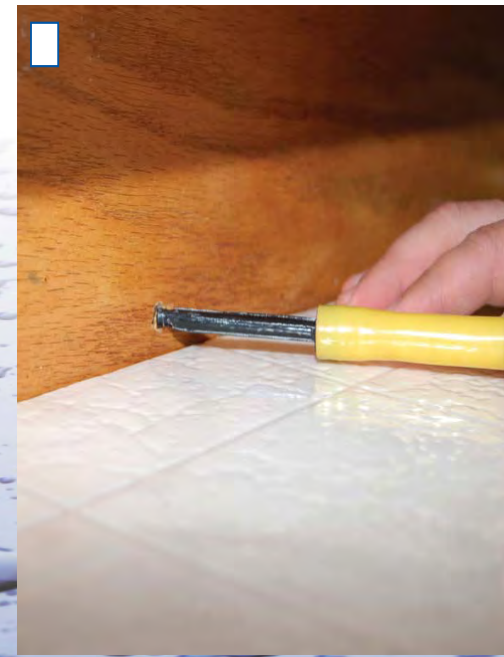
STEP 3: Dry carpet, pad and structure. (Floating)



STEP 3: Drill drying ports.



STEP 4: Install injectors into toe kick.



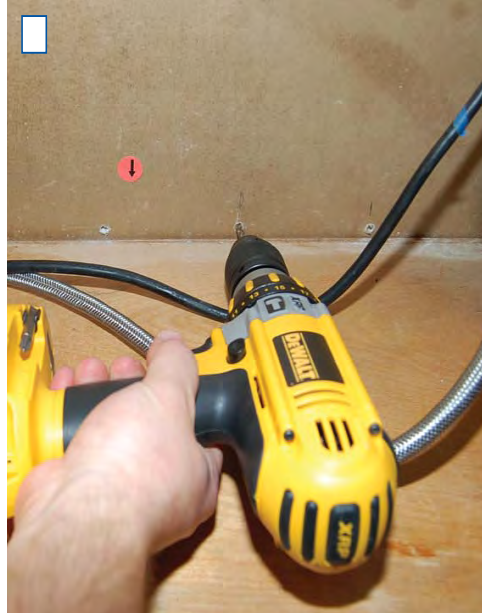
## Drying - Cabinets

## CARPET - Category 1 (Fresh Water)

**STEP 5:** Remove contents from lower cabinets, if applicable.



**STEP 6:** Drill drying ports in insulated wall.



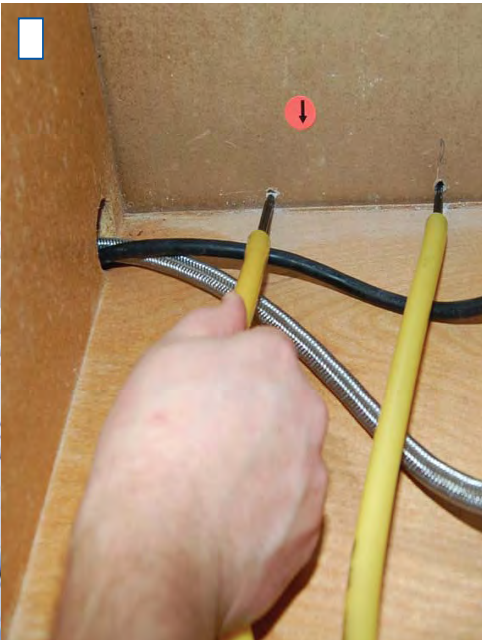
**STEP 4:** Dry carpet, pad and structure.



**STEP 5:** Restretch carpet if necessary.



**STEP 7:** Install injectors into the insulated wall.



**STEP 8:** Dry cabinets and walls.



**STEP 6:** Clean Carpet.



**STEP 7:** Re-apply protective coating, if applicable.





# CARPET - Category 2 (Rain, Dishwasher, & Similar Sources)

# Drying - Hardwood Floors

STEP 1: Locate wet areas.



STEP 2: Extract water from carpet.



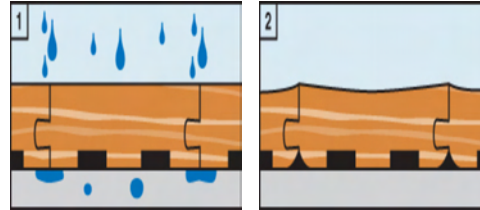
STEP 3: Remove damaged pad.



STEP 4: Apply disinfectant.

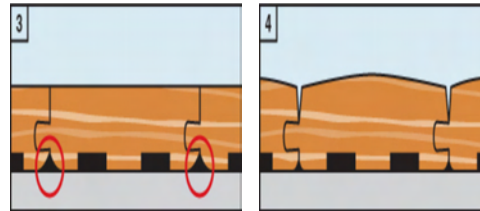


## Hardwood Water Damage



1. Moisture enters the wood floor from above, seeping between the wood and the subfloor.

2. As the top of the wood dries out more rapidly than the bottom, where the water is trapped - cupping occurs..



3. If the cupped wood is sanded, the floor will initially appear flat. Yet the bottom of the wood, remaining damp, is still cupped.

4. When the bottom of the wood eventually dries, it flattens, leaving the top of the wood crowned.

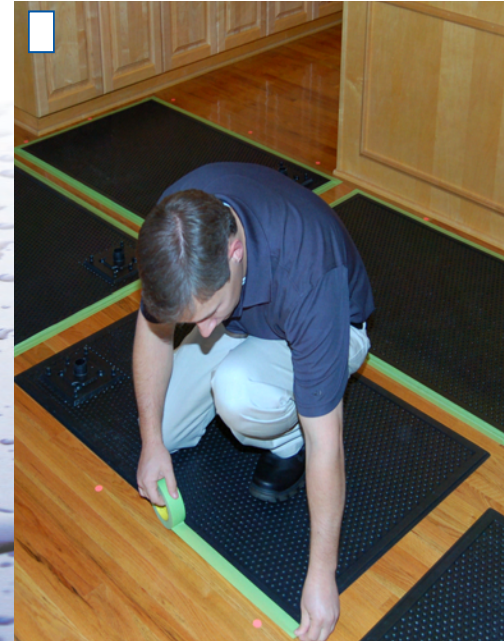
STEP 1: Locate & mark wet areas.



STEP 2: Extract excess water.



STEP 3: Install & secure drying mats and vacuum hoses.



# Drying - Hardwood Floors

# CARPET - Category 2 (Rain, Dishwasher, & Similar Sources)

STEP 4: Secure hoses and install drying equipment.



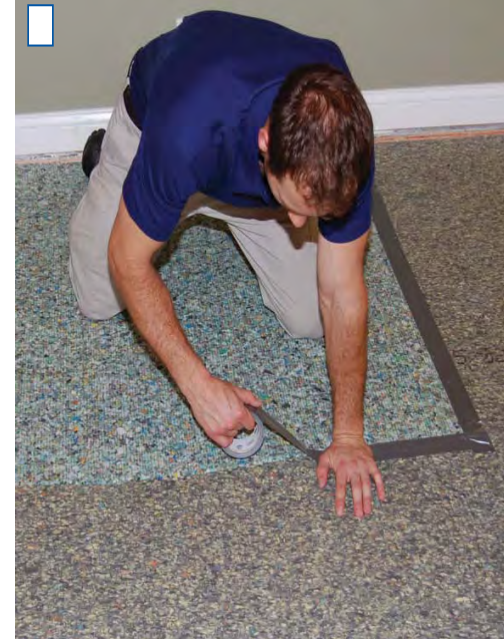
STEP 5: Tent & duct in dehumidified or dry-heated air.



STEP 5: Dry carpet and structure.



STEP 6: Replace pad.



STEP 7: Restretch carpet.



STEP 8: Clean carpet.



# Sewer Damage - Category 3 (Sewage, Silt or Rising water)

# Sewer Damage - Category 3 (Sewage, Silt or Rising water)

**STEP 1:**  
Apply initial disinfectant.



**STEP 2:**  
Extract sewage.



**STEP 3:**  
Remove affected carpet.



**STEP 7:** Detailed clean up.



**STEP 8:** Steam clean.



**STEP 4:** Remove Carpet Padding.



**STEP 5:** Set up Lead Containment, if applicable.



**STEP 6:** Remove affected baseboards and dry wall.



**STEP 9:** Final disinfectant.



**STEP 10:** Install equipment.

